

**REPORT OF THE COUNCIL TO THE SEVENTY-SEVENTH ANNUAL
GENERAL MEETING OF THE SOCIETY.**

The following table shows the progress and present state of the Society :—

									Grand Total
									Associates
									Patron
December 31, 1895	...	...	...	245	391	636	46	1	683
Since elected	...	...	...	+ 6	+ 27	...	...	...	...
Deceased	...	...	...	...	- 12	...	- 6	...	...
Resigned	...	...	...	...	- 12	...	...	...	...
Removals	...	...	...	+ 2	- 2	...	...	...	...
Expelled	...	...	...	...	- 1	...	...	...	...
December 31, 1896	...	...	...	253	391	644	40	1	685

*Mr. Knobel's Account as Treasurer of the Royal
RECEIPTS.*

Balances, 1896 January 1:—	£ s. d.	£ s. d.
At Bankers', as per Pass Book	... ... 286 12 10	
Outstanding Cheques	... ... 24 6 6	
In hand of Assistant Secretary on account of Turnor and Horrox Fund	... ... 14 8 4	
In hand of Assistant Secretary on Petty Cash Account	... ... 3 3 0	
In hand of Assistant Secretary on Account of Sales of Photographs, 1895	... ... 20 11 0	
	349 1 8	
Dividends on £13,200 Consols, 2½ per cent.	... 350 18 4	
„ on £900 New 2½-per-cent. Stock	... 21 15 0	
„ on £1,250 Metropolitan 3-per-cent. Stock	... 36 5 0	
	408 18 4	

Received on account of Subscriptions:—

Arrears	... ... ... ... 157 10 0	
Annual Contributions for 1896	... ... 604 16 0	
„ „ 1897	... ... 2 2 0	
Admission Fees	... ... 75 12 0	
First Contributions	... ... 48 6 0	
	888 6 c	
Composition Fees	... ... ... ... 168 0 0	

Sales of Publications:—

At Williams and Norgate's, 1895	... ... 20 13 8	
At Society's Rooms, 1896	... ... 37 7 6	
Sale of Photographs, 1896 66 0 6	
	124 1 8	

Income Tax refunded by Commissioners of Inland

Revenue	14 1 8
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Audited and found correct, 1897 January 6.

C. THWAITES,
DAVID SMART,
A. C. D. CROMMELIN.

£1,952 9 4

Astronomical Society, from 1896 January 1 to December 31.

EXPENDITURE.

	£	s.	d.	£	s.	d.
Assistant Secretary : Salary	250	0	0			
" " for assistance in editing Society's Publications ...	50	0	0			
" " for work in preparation of General Index ...	60	0	0			
				360	0	0
House Duty	2	12	6			
Fire Insurance	7	16	6			
				10	9	0
Printing, &c., <i>Monthly Notices</i>	326	10	9			
" <i>General Index</i>	140	19	0			
" <i>Memoirs</i> , vol. li.	223	8	0			
" Miscellaneous	42	6	6			
Woodbury type Plates	10	9	0			
Lithography and Engraving	14	15	0			
				758	8	3
Reproduction of Photographs	65	18	11			
Turnor and Horrox Fund : Purchases for Library	19	15	3			
Binding Books in Library	37	18	6			
				57	13	9
Cælostat for Eclipse Observation	100	0	0			
Clerk's Wages	52	0	0			
Postage and Telegrams	74	7	0			
Carriage of Parcels	2	14	3			
Stationery and Office Expenses	5	17	10			
				134	19	1
Expenses of Meetings	20	0	0			
Lantern Expenses	15	0	3			
				35	0	3
House Expenses	65	3	1			
Coals and Gas	39	0	3			
Electric Light Expenses	13	16	4			
Time Signal	5	0	0			
Sundry Fittings and Repairs	4	16	1			
Sundries	5	12	4			
				133	8	1
Decorating Rooms, balance of Trollope's Account	76	0	0			
Blinds on Staircase	7	1	6			
				83	1	6
Lee and Janson Fund Grants	11	10	0			
Deductions on Cheques, &c.	0	3	0			
Balances, 1896 December 31 :—						
At Bankers', as per Pass Book	186	12	1			
In hand of Assistant Secretary on account of Turnor and Horrox Fund	14	13	1			
In hand of Assistant Secretary on Petty Cash Account	0	12	4			
				201	17	6
				£1,952	9	4

Report of the Auditors.

We have examined the Treasurer's accounts for the year 1896, and have found and certified the same to be correct. The cash in hand on 1896 December 31, including the balance at the bankers', &c., amounted to £201 17s. 6d.

The funded property of the Society is the same as at the end of the previous year.

The books, instruments, and other effects in the possession of the Society have been examined, and they appear to be in a satisfactory condition.

We have laid on the table a list of the names of those Fellows who are in arrear for sums due at the last Annual General Meeting of the Society, with the amount due against each Fellow's name.

We consider that the amount for which the Society's property is insured is too small to cover the value of the library, instruments, &c., and suggest that the insurance be increased.

(Signed) DAVID SMART,
ANDREW C. D. CROMMELIN,
C. THWAITES.

1897 January 8.

Trust Funds.

The Turnor Fund: A sum of £450 2 $\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

The Horrox Memorial Fund: A sum of £100 2 $\frac{3}{4}$ -per-cent. Consols, the interest to be used in the purchase of books for the Library.

The Lee and Janson Fund: A sum of £323 16s. 6d. 2 $\frac{3}{4}$ -per-cent. Consols, the interest to be given by the Council to the widow or orphan of any deceased Fellow or Associate of the Society who may stand in need of it.

The Hannah Jackson (née Gwilt) Fund: A sum of £300 2 $\frac{3}{4}$ -per-cent. Consols, the interest to be given in Medals or other awards, in accordance with the terms of the Trust.

Assets and Present Property of the Society, 1897 January 1.

	£ s. d.	£ s. d.
Balances, 1896 December 31:—		
At Bankers'	186 12 1	
In hand of Assistant Secretary on account of		
Turnor and Horrox Fund	14 13 1	
In hand of Assistant Secretary on Petty Cash		
Account	0 12 4	
	—	—
	201 17 6	

Due on account of Subscriptions:—

4 Contributions of 4 years' standing ...	... 33 12 0
9 " 3 " ...	... 56 14 0
35 " 2 " ...	... 147 0 0
56 " 1 " ...	... 117 12 0
1 Admission Fee and First Contribution	... 3 3 0
	—
	358 1 0

Less 1 Contribution for 1897 paid in advance 2 2 0

—

355 19 0

Due from Messrs. Williams and Norgate for sales of Publications during 1896 34 5 7

£13,200 $2\frac{3}{4}$ -per-cent. Consols, including the Lee and Janson Fund, the Turnor and Horrox Fund, and the Jackson-Gwilt Fund.

£900 New $2\frac{1}{2}$ -per-cent. Consols.

£1,250 Metropolitan 3-per-cent. Stock.

Astronomical and other Manuscripts, Books, Prints, and Instruments.

Furniture, &c.

Stock of Publications of the Society.

Stock in hand of volumes of the *Memoirs* :—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I. Part 1	7	...	XXX.	153	...
I. Part 2	42	...	XXXI.	136	...
II. Part 1	51	3	XXXII.	148	...
II. Part 2	17	3	XXXIII.	157	...
III. Part 1	65	1	XXXIV.	159	1
III. Part 2	83	1	XXXV.	105	2
IV. Part 1	78	3	XXXVI.	188	8
IV. Part 2	90	3	XXXVII. Part 1	334	7
V.	101	3	XXXVII. Part 2	279	8
VI.	119	6	XXXVIII.	264	1
VII.	141	3	XXXIX. Part 1	230	3
VIII.	125	3	XXXIX. Part 2	235	3
IX.	132	3	XL.	250	1
X.	144	...	XLI.	398	...
XI.	151	...	XLII.	226	3
XII.	157	...	XLIII.	227	...
XIII.	155	...	XLIV.	207	1
XIV.	363	...	XLV.	240	...
XV.	136	...	XLVI.	220	1
XVI.	161	1	XLVII. Part 1	3	...
XVII.	145	1	XLVII. Part 2	18	...
XVIII.	137	1	XLVII. Part 3	2	...
XIX.	147	...	XLVII. Part 4	10	...
XX.	136	1	XLVII. Part 5	8	...
XXI. Part 1	310	...	XLVII. Part 6	9	...
XXI. Part 2	98	...	XLVII. Part 7	194	1
XXI. 1 & 2 (together)	58	...	XLVIII. Pt. 1	243	...
XXII.	160	1	XLVIII. Pt. 2	237	1
XXIII.	144	...	XLIX. Part 1	381	1
XXIV.	151	1	XLIX. Part 2	263	...
XXV.	161	...	L.	258	1
XXVI.	167	1	LI.	325	1
XXVII.	419	1	Index to <i>Memoirs</i>	624	3
XXVIII.	378	...			
XXIX.	400	...			

Stock in hand of volumes of the *Monthly Notices* :—

Vol.	At Society's Rooms	At Williams & Norgate's	Vol.	At Society's Rooms	At Williams & Norgate's
I.	55	...	XXX.	63	2
II.	59	...	XXXI.	91	...
III.	...	...	XXXII.	109	5
IV.	...	...	XXXIII.	91	...
V.	...	...	XXXIV.	68	1
VI.	43	...	XXXV.	52	...
VII.	2	...	XXXVI.	26	1
VIII.	153	2	XXXVII.	33	3
IX.	24	3	XXXVIII.	96	2
X.	172	1	XXXIX.	93	...
XI.	184	...	XL.	105	3
XII.	106	2	XLI.	105	5
XIII.	177	2	XLII.	114	1
XIV.	176	3	XLIII.	111	2
XV.	168	2	XLIV.	114	2
XVI.	154	1	XLV.	115	1
XVII.	167	1	XLVI.	111	...
XVIII.	242	...	XLVII.	128	2
XIX.	52	...	XLVIII.	120	1
XX.	31	...	XLIX.	113	8
XXI.	16	...	L.	115	10
XXII.	30	...	LI.	116	8
XXIII.	17	...	LII.	116	12
XXIV.	22	...	LIII.	117	15
XXV.	13	...	LIV.	117	17
XXVI.	9	1	LV.	131	3
XXVII.	3	...	LVI.	124	7
XXVIII.	70	...	1st Index ...	550	5
XXIX.	51	...	2nd , , ...	850	2

LIBRARY CATALOGUE 549 2

In addition to the above volumes of the *Monthly Notices*, the Society has a considerable stock of separate numbers of nearly all the volumes. With the exception, however, of Vols. XXXVI. to LVI., no complete volumes can be formed from the separate numbers in stock.

Instruments belonging to the Society.

A brief description of the chief instruments and other particulars relating to them will be found in *Monthly Notices*, vol. xxxvi. p. 126.

No. 1. The *Harrison* clock.
 ,, 2. The *Owen* portable circles, by *Jones*.
 ,, 3. The *Beaufoy* circle.
 ,, 4. The *Beaufoy* transit instrument.
 ,, 5. The *Herschel* 7-foot telescope.
 ,, 6. The *Greig* universal instrument, by *Reichenbach* and *Ertel*. The transit telescope, by *Utzschneider* and *Fraunhofer*, of Munich.
 ,, 7. The *Smeaton* equatorial.
 ,, 8. The *Cavendish* apparatus.
 ,, 9. The 7-foot Gregorian telescope (late Mr. *Shearman's*).
 ,, 10. The variation transit instrument (late Mr. *Shearman's*).
 ,, 11. The universal quadrat, by *Abraham Sharp*.
 ,, 12. The *Fuller* theodolite.
 ,, 13. The standard scale, by *Troughton* and *Simms*.
 ,, 14. The *Beaufoy* clock, No. 1.
 ,, 15. The *Beaufoy* clock, No. 2.
 ,, 16. The *Wollaston* telescope.
 ,, 17. The *Lee* circle.
 ,, 18. The *Sharpe* reflecting circle.
 ,, 19. The *Brisbane* circle.
 ,, 20. The *Baker* universal equatorial.
 ,, 21. The *Reade* transit.
 ,, 22. The *Matthew* equatorial, by *Cooke*.
 ,, 23. The *Matthew* transit instrument.
 ,, 24. The *South* transit instrument.
 ,, 25. A sextant, by *Bird* (formerly belonging to Captain *Cook*).
 ,, 26. A globe showing the precession of the equinoxes.
 The *Sheepshanks* collection :—
 ,, 27. (1) 30-inch transit instrument, by *Simms*, with level and two iron stands.
 ,, 28. (2) 6-inch transit theodolite, with circles divided on silver; reading microscopes, both for altitude and azimuth; cross and siding levels; magnetic needle; plumb-line; portable clamping foot and tripod stand.

No. 29. (3) Equatorial stand and clock movement for $4\frac{6}{10}$ -inch telescope (telescope lost) ; double-image micrometer ; two wire micrometers ; object-glass micrometer.

„ 30. (4) $3\frac{1}{4}$ -inch achromatic telescope, with equatorial stand ; double-image micrometer ; one terrestrial and three astronomical eyepieces.

„ 31. (5) $2\frac{3}{4}$ -inch achromatic telescope, with stand ; one terrestrial and three astronomical eyepieces.

„ 33. (7) 2-foot navy telescope.

„ 34. (8) Transit instrument of 45 inches focal length, with iron stand and also Y's for fixing to stone piers ; two axis levels.

„ 35. (9) Repeating theodolite, by Ertel, with folding tripod stand.

„ 36. (10) 8-inch pillar sextant, by Troughton, divided on platinum, with counterpoise stand and artificial horizon.

„ 37. (11) Portable zenith telescope and stand, $2\frac{3}{4}$ -inch aperture and 26 inches focal length : 10-inch horizontal circle and 8-inch vertical circle, reading to $10''$ by two verniers to each circle.

„ 38. (12) 18-inch Borda repeating circle, by Troughton, $2\frac{1}{8}$ -inch aperture and 24 inches focal length ; the circles divided on silver, the horizontal circle being read by four verniers, and the vertical circle by three verniers, each to $10''$.

„ 39. (13) 8-inch vertical repeating circle, with diagonal telescope, by Troughton and Simms ; circle divided on silver, reading to $10''$; a 5-inch circle at eye-end, reading to single minutes ; horizontal circle 9 inches diameter in brass to single minutes.

„ 40. (14) A set of surveying instruments, consisting of a 12-inch theodolite for horizontal angles only, reading to $10''$; two sets of adjusting plates ; tripod stand with enclosed telescope ; heavy stand for theodolite ; Y-piece of level ; two large and three small ground-glass bubbles divided ; level collimator, object-glass $1\frac{5}{8}$ -inch diameter and 16 inches focal length ; micrometer eyepiece, comb, and wires ; mercury bottle and trough.

„ 41. (15) Level collimator, with object-glass $1\frac{1}{2}$ -inch diameter and 16 inches focal length ; stand, rider-level, and fittings.

„ 42. (16) 10-inch reflecting circle by Troughton, reading by three verniers to $20''$; counterpoise stand ; artificial horizon, with mercury ; two tripod stands.

„ 43. (17) Hassler's reflecting circle, by Troughton, with counterpoise stand.

„ 44. (18) 6-inch reflecting and repeating circle, by Troughton and Simms, contained in three boxes, two of which form stands. Circle divided on silver, reading to single minutes ; two inside arcs divided to single degrees, 150 degrees on each side ; artificial horizon and mercury.

No. 45. (19) 5-inch reflecting and repeating circle, by Lenoir, of Paris.

„ 46. (20) Reflecting circle, by Jecker, of Paris, 11 inches in diameter, with one vernier reading to 15".

„ 47. (21) Box sextant ; reflecting plane and level.

„ 48. (22) Prismatic compass, by Troughton and Simms.

„ 49. (23) Mountain barometer.

„ 50. (24) Prismatic compass, by Thomas Jones, mounted with a cylindrical lens.

„ 51. (25) Ordinary 4½-inch compass with needle.

„ 52. (26) Dipping needle, by Robinson.

„ 53. (27) Compass needle, mounted for variation.

„ 54. (28) Magnetic intensity needle, by Meyerstein, of Göttingen ; a strongly fitted brass box with heavy magnet ; filar suspension.

„ 55. (29) Box of magnetic apparatus.

„ 56. (30) Hassler's reflecting circle, by Troughton ; a 10½-inch reflecting and repeating circle, with stand and counterpoise, divided on platinum with two movable and two fixed indices ; four verniers reading to 10".

„ 57. (31) Box sextant and glass plane artificial horizon, by Troughton and Simms.

„ 58. (32) Plane 2¾-inch speculum, artificial horizon and stand.

„ 59. (33) 2½-inch circular level horizon, by Dollond.

„ 60. (34) Artificial horizon, roof, and trough ; the trough 8½ by 4½ inches ; tripod stand.

„ 61. (35) Set of drawing instruments, consisting of 6-inch circular protractor and common protractor, T-square ; one beam compass.

„ 62. (36) A pantograph.

„ 63. (37) A noddy.

„ 64. (38) A small Galilean telescope with object-glass of rock crystal.

„ 65. (39) Five levels.

„ 66. (40) 18-inch celestial globe.

„ 67. (41) Varley stand for telescope.

„ 69. (43) Telescope, with object-glass of rock crystal.

„ 71. Portable altazimuth tripod.

„ 72. Four polarimeters.

„ 74. Registering spectroscope, with one large prism.

„ 76. Two five-prism direct-vision spectroscopes.

„ 78. 9¼-inch silvered-glass reflector and stand, by Browning.

„ 79. Spectroscope.

„ 80. A small box, containing three square-headed Nicol's prisms ; two Babinet's compensators ; two double-image prisms ; three Savarts ; one positive eyepiece, with Nicol's prism ; one dark wedge.

„ 81. A back-staff, or Davis' quadrant.

„ 82. A nocturnal or star dial.

No. 83. An early non-achromatic telescope, of about 3 feet focal length in oak tube, by Samuel Scatliffe, London.

„ 84. A Hollis observing chair.

„ 85. Double-image micrometer, by Troughton and Simms.

„ 86. 4½-inch Gregorian reflecting telescope, by Short, with altazimuth stand and 6-inch altitude and azimuth circles and two eyepieces.

„ 87. 3½-inch Gregorian reflecting telescope with wooden tripod stand.

„ 88. Pendulum, with 5-foot brass suspension rod, working on knife-edges, by Thomas Jones.

„ 89. A Rhabdological Abacus. A contrivance invented by Mr. H. Goodwyn, consisting of a box filled with compartments, in which are square rods covered with numbers, which can be arranged so as to facilitate the labour of multiplying high numbers.

„ 90. An Arabic celestial globe of bronze, 5¾ inches in diameter.

„ 91. Astronomical time watch-case, by Professor Chevalier.

„ 92. 2-foot protractor, with two movable arms, and vernier.

„ 93. Beam compass, in box.

„ 94. 2-foot navigation scale.

„ 95. Stand for testing measures of length.

„ 96. Artificial planet and star, for testing the measurement of a fixed distance at different position-angles.

„ 97. 12-cell Leclanché battery.

„ 98. 2-foot 6-inch navy telescope, with object-glass 2½ inches, by Cooke, with portable wooden tripod stand.

„ 99. 12-inch transit instrument, by Fayerer and Son, with level and portable stand.

„ 100. 9-inch transit instrument, with level and iron stand.

„ 101. Small equatorial sight instrument, by G. Adams, London.

„ 102. Sun-dial, by Troughton.

„ 103. Sun-dial, by Casella.

„ 104. Sun-dial.

„ 105. Box sextant, by Troughton and Simms.

„ 106. Prismatic compass, by Schmalcalder, London.

„ 107. Compass, by C. Earle, Melbourne.

„ 108. Prismatic compass, by Negretti and Zambra.

„ 109. Dipleidoscope, by E. Dent.

„ 110. Abney level, by Elliott.

„ 111. Pocket spectroscope, by Browning.

„ 112. Universal sun-dial.

„ 113. Double sextant, by Jones.

„ 114. Two models, illustrating the effects of circular motions.

„ 115. A cometarium.

„ 117. } Two old sun-dials.

„ 118. }

„ 119. Specimens of diffraction gratings, by Prof. W. A. Rogers.

No. 120. A 6-prism spectroscope, by Browning.
 „ 121. Spitta's improved maximum and minimum thermometer.
 „ 122. A 6-inch speculum, with flat; the speculum said to be by Sir W. Herschel, and re-figured by Sir J. Herschel.
 „ 123. A 6-inch refracting telescope, by Grubb, with 3 eyepieces.
 „ 124. Position micrometer, by Cooke.
 „ 125. A 6-inch refracting telescope, by Simms, with eyepieces and solar diagonal.
 „ 126. 3½-inch portable refracting telescope, by Tulley, with tripod stand.
 „ 127. Globe representing the visible surface of the Moon, by John Russell, R.A. (1797).
 „ 128. Bichromate battery and Ruhmkorff coil.
 „ 129. Slater's improved armillary sphere.
 „ 130. 10-inch brass pillar sextant, by Troughton.
 „ 131. Double box sextant, by Cary.

Besides the above, there is the following apparatus available for eclipse work :—

4 Slits for spectroscope.
 2 Abney lenses used in photographing the corona.
 2 Dallmeyer negative enlarging lenses.
 1 Cœlostat with 16-inch plane mirror.

The following instruments are lent, during the pleasure of the Council, to the undermentioned persons :—

No. 4. The *Beaufoy* transit instrument, to the Observatory, Kingston, Canada.
 „ 16. The *Wollaston* telescope, to Mr. R. Inwards.
 „ 22. The *Matthew* equatorial, to Mr. J. Brett.
 „ 23. The *Matthew* transit, to Captain W. Noble.
 „ 27. (1) 30-inch transit and stand, to Mr. B. T. Moore.
 „ 28. (2) 6-inch theodolite and stand, to Dr. A. A. Common.
 „ 29. (3) Equatorial mounting, clock, &c., to the Rev. C. D. P. Davies.
 „ „ Wire micrometer (No. 1), to Mr. C. Thwaites.
 „ 30. (4) 3½-inch equatorial, to Mr. E. B. Powell.
 „ 31. (5) 2¾-inch telescope and stand, to Mr. F. J. Wardale.
 „ 47. (21) Box sextant and horizon, to Mr. C. H. Johns.
 „ 50. (24) Prismatic compass, to Mr. Maxwell Hall.
 „ 69. (43) Telescope with rock-crystal object glass, to Dr. W. Huggins.
 „ 72. (a) Polarimeter, to Dr. A. M. W. Downing.
 „ 72. (c) Polarimeter, to Professor C. M. Smith.
 „ 78. 9½-inch reflector and stand, to Mr. Maxwell Hall.
 „ 85. Double image micrometer, to Mr. B. T. Moore.

No. 99. 12-inch transit with portable stand, to Mr. H. T. Vivian.
 ,, 119. Diffraction gratings, to Mr. B. T. Moore.
 ,, 120. 6-prism spectroscope, to Mr. C. Thwaites.
 ,, 123. 6-inch telescope, by Grubb (object-glass only) to Mr. W. E. Wilson.
 ,, 125. 6-inch refractor by Simms, to Dr. A. A. Common.
 ,, 126. 3½-inch portable refractor, by Tulley, to Mr. H. Sadler.
 ,, 128. Bichromate battery and Ruhmkorff coil, to the Rev. W. J. B. Roome.

The Gold Medal.

The Council have awarded the Society's Gold Medal to Mr. E. E. Barnard, for his discovery of the fifth satellite of *Jupiter*, his celestial photographs, and other astronomical work. The President will lay before the Society the grounds upon which the award has been founded.

The Hannah Jackson (née Gwilt) Gift.

The Council have awarded this Gift, consisting of a bronze medal and the accumulated dividends of three years, to Mr. Lewis Swift, for his cometary discoveries and other astronomical work.

Publications of the Society.

A General Index to volumes xxx.-lii. of the *Monthly Notices* has been published during the past year, in continuation of the General Index to volumes i.-xxix., published in 1870.